

Amendments to the Drawings:

The attached sheet includes proposed **Figure 5**, which is a segment of **Figure 4**. There is no new matter contained in the additional drawing. **Figure 5** is an additional drawing, to be added to the original four drawings filed with the application, on June 27, 2003.

Attachment: Additional sheet labeled "Proposed New Sheet"

REMARKS/ARGUMENTS

Amendments were made to the specification to correct errors and to clarify the specification. No new matter has been added by any of the amendments to the specification.

Applicants thank Examiner Shapiro for all the courtesies and helpful insight extended Applicants' representative during the March 29, 2006 telephone interview. During the interview, Applicants' representative discussed the prior art of record and the manner in which *Watanabe* fails to teach or disclose the features recited in the presently claimed invention in independent claim 1. The arguments discussed as well as additional reasons that the claims are not patentable distinguishable over the cited art are set forth in the remarks below.

Claims 1, 4-7, 9, 11-15, 17-18, 20-23, and 25 are pending in the present application. Claims 2, 3, 8, 10, 16, 19, 24, and 26 were canceled; claims 1, 4-7, 9, 11-15, 17, 20-23, and 25 were amended. Reconsideration of the claims is respectfully requested.

I. 35 U.S.C. § 102, Anticipation

The Examiner has rejected claims 1, 4-9, 11-15, 17-18, and 20-26 under 35 U.S.C. § 102(b) as being anticipated by *Watanabe et al.* (U.S. Patent No. 5,543,607) ("*Watanabe*"). This rejection is respectfully traversed.

As to claims 1, 9, 17, 25, and 26, the Office Action states:

Watanabe discloses a self-checkout system having a conveyor (51) with sensors (52a) that cause the belt of the conveyor to start transporting the items forward and past a scanner (53) and then sensors (52b) that cause the belt to stop upon sensing the item. Also, if the scanner cannot read the bar code on the item, the belt is stopped. *Watanabe* also discloses a sensor (63) that detects the presence of an operator.

Note that the operator/purchaser is in effect "sensed" when he/she places an item onto the conveyor belt. See also abstract of *Watanabe*, which describes Applicant's claimed apparatus. Note also that processing areas (54) in figure 1A or (302) in figure 1B. Note also figure 3, which describes stocker area (10), in which the conveyor moves either forward or reverse directions. See col. 10, lines 42-53. Processing is considered to include either preparing items for entry into or exit out of the machine. Note that the sensors that sense movement, for example, as described in col. 10, lines 42-53, are considered to be, at the least, the functional equivalent of proximity sensors. Note also that Applicant does not provide any specific reasons for using proximity sensors over other types of sensors.

Office Action dated January 13, 2006, pages 2-3.

A prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the

claims. *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed Cir. 1990). All limitations of the claimed invention must be considered when determining patentability. *In re Lowry*, 32 F.3d 1579, 1582, 32 U.S.P.Q.2d 1031, 1034 (Fed Cir. 1994). In this case, *Watanabe* does not teach every element of the claimed invention arranged as they are in the claims.

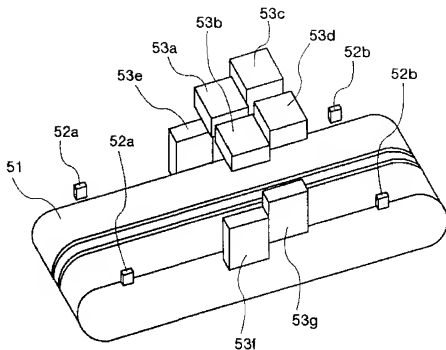
Amended claim 1 reads as follows:

1. An apparatus for transporting items for purchase at a checkout location comprising:
 - a conveyor having an upstream end for loading at least one item for purchase and a downstream end for processing the at least one item for purchase;
 - a processing area positioned proximate the downstream end of the conveyor, the processing area comprising a self-scanning area and a bagging area;
 - a start sensor positioned proximate the upstream end of the conveyor, wherein the conveyor transports the at least one item downstream towards the self-scanning processing area in response to the start sensor sensing the at least one item adjacent to the start sensor, and wherein the conveyor is stopped when the at least one item is no longer adjacent to the start sensor;
 - a user proximity sensor positioned at the self-scanning area, wherein the user proximity sensor in response to sensing a user causes the conveyor to resume transporting the at least one item towards the downstream end of the conveyor; and
 - a stop sensor positioned proximate the downstream end of the conveyor near the self-scanning area, wherein the conveyor is stopped upon the at least one item being sensed by the stop sensor.

Watanabe does not teach each and every feature of claim 1. More specifically, *Watanabe* does not teach the features of "a processing area positioned proximate the downstream end of the conveyor, the processing area comprising a self-scanning area and a bagging area," "a start sensor positioned proximate the upstream end of the conveyor, wherein the conveyor transports the at least one item downstream towards the self-scanning processing area in response to the start sensor sensing the at least one item adjacent to the start sensor, and wherein the conveyor is stopped when the at least one item is no longer adjacent to the start sensor," and "a user proximity sensor positioned at the self-scanning area, wherein the user proximity sensor in response to sensing a user causes the conveyor to resume transporting the at least one item towards the downstream end of the conveyor."

With respect to the feature "a processing area positioned proximate the downstream end of the conveyor, the processing area comprising a self-scanning area and a bagging area," the Examiner references elements 51, 52a, 52b, and 53 in *Watanabe*. These elements can be found in **Figure 2** as follows:

FIG.2



Watanabe, Figure 2.

Text descriptive of **Figure 2** is cited below:

FIGS. 1A and 2 are respectively schematic views each showing construction of a self check-out system 109, which is constructed in correspondence to a front operation, according to one embodiment (a first embodiment) of the present invention, wherein **FIG. 1A** shows a perspective view and **FIG. 2** shows the main portion of the inside thereof.

The self check-out system is constituted by a belt conveyor 51 for transporting commercial products, commercial product sensor 52 for detecting the commercial products optically for example (reference numeral 52a designates each of front commercial product sensors 52a and reference numeral 52b designates each of rear commercial product sensors), a scanner 53 for reading out, in the inside thereof, a bar code of the commercial product (reference numerals 53a to 53g designate individual scanners)...

Watanabe, column 7, lines 6-21.

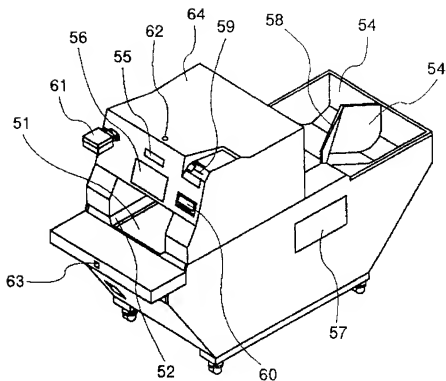
As can be seen above, *Watanabe* may teach a self-checkout system, but is not teaching a self-scanning system. *Watanabe* teaches a closed system, as evidenced by the following text: "The inside scanners 53 are provided in a mount portion, i.e., in an inner face of a tunnel portion....," *Watanabe*, column 7, lines 36 and 37. In *Watanabe*, an operator is positioned at the upstream end of the system and feeds product onto a conveyor. The conveyor takes the product into a tunnel where a system of scanners (53a – 53g) attempts to detect the barcodes of the products. *Watanabe* is clearly teaching a no manual intervention, automated scan of the barcode.

Conversely, amended claim 1 of the present invention recites, "a processing area positioned proximate the downstream end of the conveyor, the processing area comprising a self-scanning area and a bagging area." The present invention specification further describes the "self-scanning" aspect of the present invention. "The customer removes items which block the stop sensor, scans them and places them in a bag...." Present Invention Specification, page 8, lines 5 and 6.

With respect to the features, " a start sensor positioned proximate the upstream end of the conveyor, wherein the conveyor transports the at least one item downstream towards the self-scanning processing area in response to the start sensor sensing the at least one item adjacent to the start sensor, and wherein the conveyor is stopped when the at least one item is no longer adjacent to the start sensor," the Examiner does not directly address these features. However, since *Watanabe* teaches an auto-scan, not a self-scan, *Watanabe* does not teach stopping the conveyor in a convenient location for self-scan processing. The conveyor, in *Watanabe*, begins moving upon detecting an item, continues to move through the tunnel until the stop sensors detect the item. If an error is detected in the auto-scan, *Watanabe* teaches reversing the conveyor, if the auto-scan again does not detect a barcode, "the belt conveyor 51 is stopped at the position where the front commercial product sensors 52a are to detect the commercial product, and then the display for commanding the operator to perform the reoperation is displayed on the display." Not in any case, does *Watanabe* teach the features of " a start sensor positioned proximate the upstream end of the conveyor, wherein the conveyor transports the at least one item downstream towards the self-scanning processing area in response to the start sensor sensing the at least one item adjacent to the start sensor, and wherein the conveyor is stopped when the at least one item is no longer adjacent to the start sensor."

With respect to the feature, " a user proximity sensor positioned at the self-scanning area, wherein the user proximity sensor in response to sensing a user causes the conveyor to resume transporting the at least one item towards the downstream end of the conveyor," the Examiner references element 63. The Examiner states, "*Watanabe* also discloses that the operator is sensed by a sensor (63), the system then becoming operable." Office Action dated January 13, 2006. Element 63 can be found in **Figures 1A and 1B**. **Figure 1A** is shown as follows:

FIG.1A



Watanabe, **Figure 1A**.

The text supporting the element **63** is cited below:

First, when it has been detected by the operator sensor **63** that the operator stands in front of the self check-out system of the present embodiment, the system goes to an operable state, and then the display for showing the operation method is indicated in the display **55**. At this time, the belt conveyor **57** is in a stop state and the stopper **57** is in a passing prohibition state.

Watanabe, column 7, lines 49-56.

As can be seen from the paragraph cited above, *Watanabe* teaches that, when the operator is sensed by sensor **63**, the system goes to an operable state. An operable state, in *Watanabe*, means that the display screen activates and shows the operation method. *Watanabe* makes it clear that the belt conveyor

is in a stop state. Conversely, amended claim 1 recites, "a user proximity sensor positioned at the self-scanning area, wherein the user proximity sensor in response to sensing a user causes the conveyor to resume transporting the at least one item towards the downstream end of the conveyor."

Further, **Figure 1A** and text cited above do not teach "a user proximity sensor positioned at the self-scanning area, wherein the user proximity sensor in response to sensing a user causes the conveyor to resume transporting the at least one item towards the downstream end of the conveyor." *Watanabe*, does not teach that element 63, sensing a user, causes the conveyor to continue the movement of said items, but rather teaches that the conveyor is in a stop state. In addition, *Watanabe* does not teach a user proximity sensor positioned at the self-scanning area. As discussed above, *Watanabe* does not teach a self-scanning area. Other than merely listing operator sensor 63 as a component, element 63 is mentioned in one other paragraph in *Watanabe*, as follows:

Although in the above-mentioned embodiment, there is shown an example in which in accordance with the detection of the commercial product by the commercial product sensors 8, the belt conveyor 6 is started to be driven, in order to realize the present invention, such an example as to have no product sensor 8 may be available. In this case, that example can be realized on the basis of the control in which after turning the power source on, the belt conveyor 6 is always driven in the forward direction, or at the time when the operator detection sensor 63 has detected the operator, the belt conveyor 6 is started to be driven in the forward direction. Therefore, as for the control for operating the conveyor controller (the transport controlling unit) when transporting the commercial product (i.e., when transporting the commercial product from the commercial product casted portion to the product identifying unit such as the CCD camera), there are two operations, i.e., one operation for starting the conveyor, which is being stopped, to be driven in the forward direction, and the other operation for not particularly performing the operation control for the conveyor which is already driven and for maintaining the belt conveyor as it is.

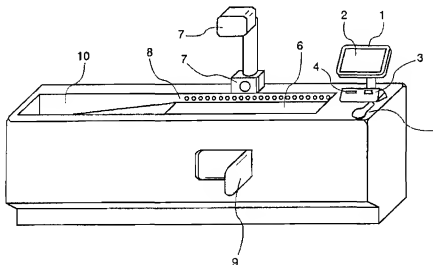
Watanabe, column 14, lines 33- 54.

In the above cited section, *Watanabe* teaches that if the system does not have product sensors 8 then the operator detection sensor 63 controls the belt. *Watanabe* teaches therefore, that if there are no product sensors the conveyor is run in forward. Additionally, as discussed above, if there are product sensors, *Watanabe* teaches, it is the product sensors that control the conveyor movement. If there is an error function in reading the barcode, then *Watanabe* teaches reversing the conveyor, in an upstream movement of the items. In contrast, amended claim 1 of the present invention recites the features " a user proximity sensor positioned at the self-scanning area, wherein the user proximity sensor in response to sensing a user causes the conveyor to resume transporting the at least one item towards the downstream end of the conveyor."

Furthermore, the Examiner refers to column 10, lines 42-53 stating, "Note also **Figure 3**, which describes stocker area (10), in which the conveyor moves either forward or reverse directions. Processing is considered to include either preparing items for entry into or exit out of the machine."

Figure 3 is shown below:

FIG.3



Watanabe, **Figure 3**.

The cited section follows:

This operation will herein below be described on the basis of the actual mechanical and electrical motions. When the card has been inserted, the card reader 4 reads out the information stored in the card and then discharges the card. The belt conveyor 6 transports the commercial product between the product casted portion and the commercial product stocker 10 in both the directions, i.e., in the forward and reverse directions. A plurality of commercial product sensors 8 are disposed along the transport path of the belt conveyor 6 in order to perform both the detection of the commercial product and the monitoring of the movement thereof.

Watanabe, column 10, lines 42-53.

Applicants respectfully disagree with the Examiner's interpretation of this section of *Watanabe*. Here, *Watanabe* is teaching that the conveyor can reverse in case of error, rather than either end of the system in *Watanabe* can be used for preparing items for entry, as the Examiner indicates. Evidence that *Watanabe* does not teach that the stocker can be used for preparing items for entry is that element 9 in

Figure 3 inhibits the passing of an operator/customer to the stocker end of the device until the total transaction is complete.

Therefore, the rejection of amended claim 1 has been overcome. Further, independent claims 9, 17, and 25 contain features similar to claim 1. Therefore, these claims also are patentable over this cited reference. Since claims 4-7, 11-15, and 17-23 depend from claims 1, 9, and 17; the same distinctions between *Watanabe* and the claimed invention in the independent claims apply to these dependent claims. Consequently, it is respectfully urged that the rejection of claims 1, 4-7, 9, 11-15, 17-18, 20-23, and 25 under 35 U.S.C. § 102 has been overcome.

Furthermore, *Watanabe* does not teach, suggest, or give any incentive to make the needed changes to reach the presently claimed invention. *Watanabe* actually teaches away from the presently claimed invention because it teaches an auto-scan type of system as opposed to a self-scan system as in the presently claimed invention. Absent the Examiner pointing out some teaching or incentive to implement *Watanabe* and a self-scan system, one of ordinary skill in the art would not be led to modify *Watanabe* to reach the present invention when the reference is examined as a whole. Absent some teaching, suggestion, or incentive to modify *Watanabe* in this manner, the presently claimed invention can be reached only through an improper use of hindsight using the applicants' disclosure as a template to make the necessary changes to reach the claimed invention.

II. 35 U.S.C. § 103, Obviousness

The Examiner has rejected claims 1, 4-9, 11-15, 17-18, and 20-26 under 35 U.S.C. § 103(a) as being unpatentable over *Watanabe et al.* (U.S. Patent No. 5,543,607) ("*Watanabe*") in view of *Begum et al.* (U.S. Patent No. 5,420,606) ("*Begum*"). This rejection is respectfully traversed.

As to claims 1, 9, 17, 25, and 26, the Office Action states:

Watanabe discloses a self-checkout system having a conveyor (51) with sensors (52a) that cause the belt of the conveyor to start transporting the items forward and past a scanner (53) and then sensors (52b) that cause the belt to stop upon sensing the item. Also, if the scanner cannot read the bar code on the item, the belt is stopped. *Watanabe* also discloses that the operator is sensed by a sensor (63), the system then becoming operable.

Watanabe does not expressly disclose, but *Begum* discloses the use of a motion sensor to sense motion of a customer and either "wake up" to deactivate a device. See *Begum*, col. 6, lines 11-17, which discuss use of motion detector (62) to detect a shopper. *Begum* in col. 6, lines 35-38 disclose mounting such a motion detector (70) on a checkout counter (41).

The suggestion/motivation would have been to "conserve power" by turning off the conveyor belt when it is not needed. See *Begum*, col. 6, lines 11-17.

Office Action dated January 13, 2006, pages 3-4.

The section of *Begum* cited by the Examiner is as follows:

Alternately, to conserve power on the portable unit 14, which is minimized in size and therefore has a small battery pack, the message sending unit 58 has a motion detector 62 to detect the presence of a communication unit 14 and transmit a wake-up call, as a cart is rolled by, or a shopper walks by the message sending unit 58.

Begum, column 6, lines 11-17.

In the section cited above, *Begum* teaches a message sending unit that has a motion detector to detect a communication unit and transmit a wake-up call as a shopper walks by the message sending unit.

The Applicants' respectfully point out that it is the start sensors which initially activate the conveyor, in the present invention. The feature according to amended claim 1 of the present invention states, "a start sensor positioned proximate the upstream end of the conveyor, wherein the conveyor transports the at least one item downstream towards the self-scanning processing area in response to the start sensor sensing the at least one item adjacent to the start sensor, and wherein the conveyor is stopped when the at least one item is no longer adjacent to the start sensor." The user proximity sensor merely resumes or continues the conveyor's movement, "a user proximity sensor positioned at the self-scanning area, wherein the user proximity sensor in response to sensing a user causes the conveyor to resume transporting the at least one item towards the downstream end of the conveyor." The user proximity sensor is not used as a "wake-up call" or as a power conservation device as indicated by the Examiner. Since claims 4-7, 11-15, and 17-23 depend from claims 1, 9, and 17; the same distinctions between *Begum* and the claimed invention in the independent claims apply to these dependent claims. Therefore, the rejection of claims 1, 4-7, 9, 11-15, 17-18, 20-23, and 25 under 35 U.S.C. § 103 has been overcome.

III. Conclusion

It is respectfully urged that the subject application is patentable over *Watanabe* and over *Watanabe* in view of *Begum* and is now in condition for allowance.

The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

DATE: October 10, 2006

Respectfully submitted,

/Mary Adams-Moe/

Mary Adams-Moe
Reg. No. 57,883
Yee & Associates, P.C.
P.O. Box 802333
Dallas, TX 75380
(972) 385-8777
Attorney for Applicants